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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/700,201	11/03/2003	Ray J. Wu	19603/4301 (CRF D-3082-03	4192

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EXAMINER	
PAGE, BRENT T	
ART UNIT	**PAPER NUMBER**
1638	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/700,201	WU ET AL.	
	Examiner	Art Unit	
	Brent Page	1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 February 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-83* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-83* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 5-6, 11-12, 21-22, 27-28, 53-54, 69-70, and 77-78, drawn to a transgenic monocot plant transformed with a nucleic acid encoding an enzyme for trehalose biosynthesis under control of an inducible promoter, wherein the enzyme for trehalose biosynthesis is trehalose-6-phosphate synthase encoded by an *E. coli otsA* gene, and the inducible promoter is a stress-inducible and an abscisic acid-inducible promoter, classified in class 800, subclass 289, for example.

II. Claims 5-6, 11, 13, 21-22, 27, 29, 53-54, 69-70, 77 and 79, drawn to a transgenic monocot plant transformed with a nucleic acid encoding an enzyme for trehalose biosynthesis under control of an inducible promoter, wherein the enzyme for trehalose biosynthesis is trehalose-6-phosphate synthase encoded by an *E. coli otsA* gene, and the inducible promoter is a light-inducible, RbcS promoter, classified in class 536, subclass 24.1, for example.

III. Claims 7-8, 11-12, 23-24, 27-28, 55-56, 71-72, and 77-78, drawn to a transgenic monocot plant transformed with a nucleic acid encoding an enzyme for trehalose biosynthesis under control of an inducible promoter, wherein the enzyme for trehalose biosynthesis is trehalose-6-phosphate phosphatase encoded by an *E. coli otsB* gene, and the inducible promoter is a stress-inducible and an abscisic acid-inducible promoter, classified in class 435, subclass 252.2, for example.

IV. Claims 7-8, 11, 13, 23-24, 27, 29, 55-56, 71-72, 77, and 79, drawn to a transgenic monocot plant transformed with a nucleic acid encoding an enzyme for trehalose biosynthesis under control of an inducible promoter, wherein the enzyme for trehalose biosynthesis is trehalose-6-phosphate phosphatase encoded by an *E. coli otsB* gene, and the inducible promoter is a light-inducible, RbcS promoter, classified in class 800, subclass 278, for example.

V. Claims 9, 11-12, 25, 27-28, 37-42, 57, 74-78, drawn to a transgenic monocot plant transformed with a first nucleic acid encoding an enzyme for trehalose biosynthesis under control of an inducible promoter, wherein the enzyme for trehalose biosynthesis is trehalose-6-phosphate synthase encoded by an *E. coli otsA* gene, a second nucleic acid encoding an enzyme for trehalose biosynthesis under control of an inducible promoter, wherein the enzyme for trehalose biosynthesis is trehalose-6-phosphate phosphatase encoded by an *E. coli otsB* gene and the inducible promoter is a stress-inducible and an abscisic acid-inducible promoter, classified in class 536, subclass 23.6, for example.

VI. Claims 9, 11, 13, 25, 27, 29, 37-42, 57, 75-77, and 79, drawn to a transgenic monocot plant transformed with a first nucleic acid encoding an enzyme for trehalose biosynthesis under control of an inducible promoter, wherein the enzyme for trehalose biosynthesis is trehalose-6-phosphate synthase encoded by an *E. coli otsA* gene, a second nucleic acid

encoding an enzyme for trehalose biosynthesis under control of an inducible promoter, wherein the enzyme for trehalose biosynthesis is trehalose-6-phosphate phosphatase encoded by an *E. coli otsB* gene and the inducible promoter is a light-inducible, RbcS promoter, classified in class 800, subclass 295, for example.

VII. Claims 9-12, 25-28, 37-48, 57-58, 74-78, 80, and 82, drawn to a transgenic monocot plant transformed with a nucleic acid encoding an enzyme for trehalose biosynthesis under control of an inducible promoter, wherein the plant is transformed with a trehalose-6-phosphate synthase/trehalose-6-phosphate phosphatase fusion gene, and the inducible promoter is a stress-inducible and an abscisic acid-inducible promoter, classified in class 435, subclass 69.7, for example.

VIII. Claims 9-11, 13, 25-27, 29, 37-48, 57-58, 74-77, 79, 81, and 83, drawn to a transgenic monocot plant transformed with a nucleic acid encoding an enzyme for trehalose biosynthesis under control of an inducible promoter, wherein the plant is transformed with a trehalose-6-phosphate synthase/trehalose-6-phosphate phosphatase fusion gene, and the inducible promoter is a light-inducible, RbcS promoter, classified in class 536, subclass 23.4, for example.

Claims 1-4, 14-20, 30-36, 49-52, 59, 60-68, and 73 link inventions I-VIII. The restriction requirement of the linked inventions is subject to the nonallowance of the linking claims, claims 1-4, 14-20, 30-36, 49-52, 59, 60-68, and 73. Upon the allowance

of the linking claims, the restriction requirement as to the linked inventions shall be withdrawn and any claims depending from or otherwise including all the limitations of the allowable linking claims will be entitled to examination in the instant application. Applicants are advised that if any such claims depending from or including all the limitations of the allowable linking claims are presented in a continuation or divisional application, the claims of the continuation or divisional application may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application. Where a restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. *In re Ziegler*, 44 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

The inventions are distinct, each from the other because:

Inventions I, III, V, and VII are unrelated to Inventions II, IV, VI, and VIII. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different modes of operation. Inventions I, III, V, and VII require a stress-inducible and abscisic acid-inducible promoter not required by Inventions II, IV, VI, and VIII. Inventions II, IV, VI, and VIII require a light-inducible RbcS promoter not required by Inventions I, III, V, and VII. For the reasons given above, Inventions I, III, V, and VII are distinct from Inventions II, IV, VI, and VIII and restriction is therefore proper.

Inventions I and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of

operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different modes of operation and different functions. Invention I requires a nucleic acid sequence, enzyme and enzyme activity not required by Invention III. Invention III requires a nucleic acid sequence, enzyme and enzyme activity not required by Invention I. For the reasons given above, Inventions I and III are distinct from one another and restriction is therefore proper.

Inventions I and V are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different modes of operation, different functions, and different effects. Invention I does not require the additional nucleotide sequences, additional enzymes, or the additional enzymatic properties required by Invention V. For the reasons given above, Invention I and Invention V are distinct from one another and restriction is therefore proper.

Inventions I and VII are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different modes of operation, different functions, and different effects. Invention I does not require the fusion gene, fusion protein, the additional enzymatic properties or the additional sequence features of the genetic construct required by Invention VII. For the reasons given above, Invention I and Invention VII are distinct from one another and restriction is therefore proper.

Inventions II and IV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different modes of operation and different functions. Invention II requires a nucleic acid sequence, enzyme and enzyme activity not required by Invention IV. Invention IV requires a nucleic acid sequence, enzyme and enzyme activity not required by Invention II. For the reasons given above, Inventions I and III are distinct from one another and restriction is therefore proper.

Inventions II and VI are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different modes of operation, different functions, and different effects. Invention II does not require the additional nucleotide sequences, additional enzymes, or the additional enzymatic properties required by Invention VI. For the reasons given above, Invention II and Invention VI are distinct from one another and restriction is therefore proper.

Inventions II and VIII are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different modes of operation, different functions, and different effects. Invention II does not require the fusion gene, fusion protein, the additional enzymatic properties or the additional sequence features of the

genetic construct required by Invention VIII. For the reasons given above, Invention II and Invention VIII are distinct from one another and restriction is therefore proper.

Inventions III and V are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different modes of operation, different functions, and different effects. Invention III does not require the additional nucleotide sequences, additional enzymes, or the additional enzymatic properties required by Invention V. For the reasons given above, Invention III and Invention V are distinct from one another and restriction is therefore proper.

Inventions III and VII are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different modes of operation, different functions, and different effects. Invention III does not require the fusion gene, fusion protein, the additional enzymatic properties or the additional sequence features of the genetic construct required by Invention VII. For the reasons given above, Invention III and Invention VII are distinct from one another and restriction is therefore proper.

Inventions IV and VI are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different modes of operation, different

functions, and different effects. Invention IV does not require the additional nucleotide sequences, additional enzymes, or the additional enzymatic properties required by Invention VI. For the reasons given above, Invention IV and Invention VI are distinct from one another and restriction is therefore proper.

Inventions IV and VIII are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different modes of operation, different functions, and different effects. Invention IV does not require the fusion gene, fusion protein, the additional enzymatic properties or the additional sequence features of the genetic construct required by Invention VIII. For the reasons given above, Invention IV and Invention VIII are distinct from one another and restriction is therefore proper.

Inventions V and VII are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different modes of operation. Invention V does not require the fusion gene or the fusion protein required by Invention VII. Invention VII does not require the separate promoters and terminators linked to each trehalose biosynthesis gene, required by Invention V. For the reasons given above, Invention V and Invention VII are distinct from one another and restriction is therefore proper.

Inventions VI and VIII are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different modes of operation. Invention VI does not require the fusion gene or the fusion protein required by Invention VIII. Invention VIII does not require the separate promoters and terminators linked to each trehalose biosynthesis gene, required by Invention VI. For the reasons given above, Invention VI and Invention VIII are distinct from one another and restriction is therefore proper.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brent Page whose telephone number is (514)-272-5914. The examiner can normally be reached on Monday-Friday 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on (571)-272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Brent T Page

DAVID T. FOX
PRIMARY EXAMINER
GROUP 1~~80~~ 1638